ABSTRACT AND BIOGRAPHY

Managing Software, Assessing the Software Components on your Project

This presentation will explore the techniques and questions needed by Project Managers to better understand software development activities. What are good software management techniques for managing projects with software? How can metric help manage and status software development activities. How does the software lifecycle fit into the system lifecycle? What questions do Project managers need to ask at different lifecycle points and reviews? What are good software acquisition guidelines for system that contain embedded software? How can Project managers bring forward deployable managerial strategies to effectively address risks of flight software development?

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Dr. Kelly is the Program Executive for Software Engineering within the NASA Headquarters Office of Chief Engineer. His responsibilities include the establishment of Agency wide engineering and management policy, guidance, processes and supporting infrastructure to effectively meet the scientific and technical objectives of software products developed under NASA funding. Dr. Kelly is a certified Project Management Professional (Project Management Institute certificate #492099) and also received NASA's Exceptional Service Medal in 2001. Dr. Kelly also serves as the Chair of the NASA Software Working Group and is a member of the CMMI Steering Group (co-sponsored by DoD and NDIA). His accomplishments include leadership responsibilities in the development and release of NPR 7150.2, NASA Software Engineering Requirements; NPD 2820.1, NASA Software Policy; the annual NASA Software Inventory; and the Agency's Software Engineering Curriculum Plan. Previously he served as a Principal Engineer at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, CA and led Agency-wide initiatives in Formal Methods for Computer Systems, and Software Formal Inspections. Prior to joining NASA-JPL, Dr. Kelly was a professor of Computer Science at Furman University in Greenville, SC, and a Mathematics professor at Darton College in Albany, GA. He is originally from Miami, Florida and received his degrees from Florida State University.

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Mr. Crumbley is the Special Assistant in Space System Department, responsible for Ares Avionics and Software Development at NASA Marshall Space Flight Center. In this capacity, he is provides Engineering support to the Ares Project Office and has served as the co-lead of the NASA Software Initiative for the past 6 years. He has over 20 years experience working in software engineering. Prior to this position, Mr. Crumbley

served NASA in numerous capacities including: two years as the Division Lead for Avionics Systems Division, two years as the Division Lead for Data Systems and Software Division, participated on the NASA Software Engineering Requirements NPR development team (2004), served as the Software Engineering NASA Independent Technical Authority, served as a member on the Mars Climate Observer investigation team, 5 years as the Branch lead of the MSFC Flight Software organization, 12 years experience as a software engineer supporting programs like International Space Station and Chandra Space Telescope. Mr. Crumbley has led in-house and contractor produced mission critical real-time embedded software development projects. He has developed an extensive set of metrics for monitoring software development progress and tracking defects. Mr. Crumbley has collaborated with other NASA centers and industry on the software research and process improvement activities. He managed the first NASA software organization to achieve Software Engineering Institute's Capability Maturity Model Integrated level 3 rating.